

**SOUTHERN CALIFORNIA  
EDUCATION AND RESEARCH CENTER  
FOR OCCUPATIONAL SAFETY AND  
HEALTH**

**SUMMARY ANNUAL REPORT**

**JULY 1, 2010 – JUNE 30, 2011**

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**SUBMITTED BY:**

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## **Southern California ERC Summary Annual Center Report for 2010-2011**

**A. Center Overview and Administration:** The Region IX Southern California NIOSH Education and Research Center (SCERC) consists of the Center Administration and Planning Core and seven training programs including three core academic programs: Industrial Hygiene (IH), Occupational and Environmental Health Nursing (OEHN), and Occupational Medicine (OM); and four center-wide programs: Outreach, Continuing Education (CE), Pilot/Small Projects (P/SP) Research Training Program, and a Targeted Research Training (TRT). The TRT includes a special research training addressing work organization and psychosocial risk factors. Degrees offered by ERC programs include MPH, MS, MSN, PhD, DrPH, and residency and other professional certificates. Our Center represents a coordinated, interdisciplinary set of professional education, continuing education, research and outreach activities that have had and will have a positive impact on the Region's and Nation's occupational health and safety practice.

1. Coordination and Integration of ERC programs: OM is located at University of California at Irvine (UCI); all other programs and Center Administration are housed at the University of California Los Angeles (UCLA). The administrative core was led by Interim Director Dr. John Froines until December 31, 2010. One of the top priorities of Center Administration had been permanently filling the position of **Center Director**. Concluding a wide-ranging search, UCLA recruited a new full professor, Niklas Krause, MD, PhD, in the EHS department who began serving as Center Director January 1, 2011. He was previously Associate Professor in Residence in the Division of Occupational and Environmental Medicine in the School of Medicine at UC San Francisco. Dr. Krause represented our ERC at the January 25/26 AUPOHS meeting in Washington, D.C., and he is promoting increased collaboration with other ERCs including our sister organization in Northern California. The Deputy Director is Dr. Dean Baker of UC Irvine and the ERC Administrator is Ms. DT Evans. Our seven-member **Executive Committee** consists of the Director, Deputy Director, Program Directors, and Center Administrator. Our **External Advisory Board** has been expanded to include members from all states in Region IX and now consists of 19 members representing each of the core disciplines of our ERC plus labor and continuing education. The Executive Committee developed and implemented **two new mandatory interdisciplinary activities** (Fall Student 3-Day Student Orientation and Quarterly Clinical Case Conferences) **increasing the frequency of structured interdisciplinary activities from two in 2009, over three in 2010, to five scheduled in 2011**. One activity is our annual ERC interdisciplinary plant visit and workshop. In 2011 trainees toured an industrial facility (Pratt-Whitney Rocketdyne) and used it as a case study to understand the role of the different occupational health and safety disciplines. Another activity is our annual interdisciplinary dinner meeting with all trainees, Advisory Board Members, ERC and COEH faculty, hosting pilot projects poster sessions, and keynote addresses from outside speakers, typically held in January. The Fall 3-Day Student Orientation with incoming and senior students, faculty, Advisory Board members, and outside professionals is a new and third interdisciplinary activity implemented in 2010. Fourth, quarterly Interdisciplinary Case Conferences have been integrated into mandatory courses of all core academic programs both at UCLA and UCI. The Center will also require all supported students to participate in the 4-hour Ethics for Health and Safety Professionals webinar in Spring of each year.

2. Strategic Planning: In 2010, a major **needs assessment** was conducted among alumni and members of the professional associations in Region IX. A total of 357 responses were received. In 2011, we conducted **six Executive Committee and three External Advisory Board in-person meetings** to revise our 2008 strategic plan and to implement recommendations of NIOSH reviewers. We focused on strategic changes in IH and OEHN curriculums, assessing needs and feasibility for expanding doctoral training in allied disciplines, and developing detailed plans to strengthen center-wide activities such as interdisciplinary coordination, diversity recruitment, and the expansion of outreach activities in Region IX beyond Southern California.

## **B. Center Programs:**

1. Industrial Hygiene: The IH Program completed its 26<sup>th</sup> year as NIOSH-supported program and 17<sup>th</sup> year as a fully ABET accredited program. Currently, the SCERC supports two MS, five PhD, one DrPh, and four core faculty members in the IH program. The IH curriculum underwent changes to allow trainees more flexibility in choosing elective courses by establishing minors in Human Toxicology, Industrial Hygiene Chemistry, and Industrial Hygiene Management/Policy. Dr. Yifang Zhu has been hired as new Assistant Professor in the Department of Environmental Health Sciences in 2010 and joined the faculty of the IH program. Other accomplishments during the 2010-11 funding period include: All of the 3 master's students who graduated in June 2010 obtained jobs; IH students were awarded SCERC pilot project grant, a HRSA Public Health Fellowship, two AIHF, two SCAIHA, and two Tony Norton Fellowships. The faculty published 13 peer-reviewed papers and brought in about \$3 million in grants.

2. Occupational Medicine: The OM residency program was reviewed by the ACGME in 2010 and received full re-accreditation for the maximum period of five years. Ninety-three percent of the graduates taking the board exam have become board certified in occupational medicine. Seven out of 8 residents have participated in the MS in environmental toxicology program. For more than a decade, one hundred percent of entering residents have graduated from the program, taken and passed the APBM board certification in occupational medicine, and now practice as occupational medicine specialists. The program graduates account for a substantial proportion of the board certified occupational medicine specialists in Southern California.

We have expanded the program's field training opportunities. During the current project period, we established teaching affiliations with two US Navy occupational health clinics – one of which focuses on musculoskeletal injuries among military recruits – and with CompWest Insurance Company, which focuses on utilization review, an increasingly important career option for our trainees. The program also provides a CME approved Grand Rounds on occupational medicine as part of the ERC outreach mission.

The faculty provided regional, national and international leadership in the field. Dr. Dean Baker served as the president of the International Society for Environmental Epidemiology -- the largest international professional society in this field; he also serves on the NIOSH Task Force for the Occupational Safety and Health Workforce Assessment Project. Dr. Peter Schnall served as chair of the Committee on Work and Cardiovascular Disease of the International Commission on Occupational Health. Appointed by the governor, Dr. Ulrike Luderer served as the chair of the California State Environmental Contaminant Biomonitoring Program Scientific Guidance Panel. Dr. Leslie Israel served as a board member of the Western Occupational and Environmental Medicine (WOEMA) and is chair of the organizing committee for the 2010 Western Occupational Health Conference. Dr. Israel served as the chair of the national occupational medicine residency directors group.

3. Occupational and Environmental Health Nursing: The SCERC Occupational and Environmental Health Nursing (OEHN) program at UCLA is the only Masters level degree granting occupational health nursing specialty program in Southern California. Our graduates have a unique perspective framed within the interdisciplinary academic structure of the NIOSH ERC. Training activities include didactic and clinical practicum rotations that culminate in a Masters of Science in Nursing (MSN) within two specialty tracks: OEHN Administration or OEHN Adult Nurse Practitioner. Fourteen OEHN students received NIOSH training grant support during the 2010 – 2011 academic year; eight trainees graduated in June 2011.

The OEHN program participated in a new diversity recruitment effort by the UCLA School of Nursing that more than tripled fall 2010 OEHN applicants from underrepresented groups. The OEHN program continued laying a foundation for a PhD in OEHN within the SCERC by enrolling a third PhD student while two continuing students successfully passed their written qualifying examinations and began dissertation research in the area of workplace health and safety. These two students are in their third year of study. One of these students competed successfully for SCERC Pilot Project funding to conduct a qualitative study of childhood cancer survivors in the workplace. The other student competed successfully for NRSA funding to conduct research evaluating uranium and heavy metal contamination in foods produced for sale and consumption on Navajo lands in New Mexico. Also related to doctoral training, we leveraged our OEHN program resources by interfacing with another educational program in the School of Nursing funded by a HRSA grant (L. Phillips, PI). The HRSA grant supports fast track BS to PhD for students who integrate gerontology content throughout their academic preparation. One HRSA grant student has enrolled in the OEHN PhD program thus far. She is in her second year of study and is interested in the topic of retention of older, minority nurses in hospital settings.

3. Pilot/Small Project Research Training: The objective of the Southern California ERC Pilot Project Research Training Program is to enhance the research training opportunities for ERC and TPG trainees, junior faculty, and young investigators in Region IX by providing funding for pilot research projects. These pilot research projects may be small studies or short-term research projects to explore feasibility, to collect preliminary data, or to develop plans for more extensive research projects supported by other more long-term funding. During the 2010-11 period we received 5 high quality applications and were able to fund all of them using additional discretionary funds from Center Administration. Since the beginning of the PSPP in 1999 through the 2010-11 cycle we have recommended for funding 49 projects that have included 30 Trainees, including ERC and TPG, 12 junior faculty, and 3 new investigators. During the last 5 years five peer-reviewed articles have been accepted or published and one peer-reviewed journal article has been submitted as a result of PSPP funding. In that same time period, six grants, totaling \$2,323,000, have been obtained building on PSPP program research projects.

4. Targeted Research Training: The Targeted Research Training (TRT) Program is a joint program of the UCLA and UC Irvine campuses. The Program uses several strategies to enhance research training and awareness of NORA, including (a) provide technical research support within the SCERC; (b) coordinate interdisciplinary research; (c) train graduate students who do projects with a NORA focus; and (d) organize and teach outreach programs related to NORA research. A majority of the funding for the TRT Program has been used to provide partial stipends for doctoral research training of six students in the Industrial Hygiene program. During the budget period, the TRT program also provided technical support for NORA research training for doctoral students in the Industrial Hygiene core program through the purchase of supplies and laboratory analyses that are being used for NORA research training.

The TRT program has provided research training in ERC courses. A focus of the training has been the SCERC initiative in work organization and workplace psychosocial factors. This initiative led to research projects that have provided an opportunity for SCERC trainees to participate in field research. An example of outreach meetings includes presentations at the California Work and Health Study Group to present NORA-related research on work organization and psychosocial factors.

Another positive development during the current project period was the appointment of Dr. Bongkyoo Choi as a tenure-line assistant professor at UC Irvine. Dr. Choi initially came to UC Irvine as a post-doctoral trainee (without SCERC stipend support) to work with Drs. Schnall and Baker in the TRT work organization research training initiative. He was very successful in publishing and obtaining a NIOSH grant, leading to his faculty appointment. There has been significant growth in this component of the TRT Program with very little funding support.

5. Continuing Education: The Continuing Education Program of the SCERC continues to be the premier continuing health and safety education program in Region IX, along with our sister ERC at UC Berkeley. In September 2010, the program received approval from the California Department of Public Health to become an Accrediting Agency for Registered Environmental Health Specialists (REHS). Additional locations in Region IX have been added, including Orange County and Tempe, Arizona, with others being scouted. The Southern California ERC constantly updates its offerings and curriculum to be able to offer the most up-to-date best practices and emerging hazards. In 2010/11 we offered 89 courses and trained 1,688 participants -- industrial hygiene (159), occupational medicine (179), occupational health nursing (118), occupational safety (380), and other disciplines (852). Of those, 95 attended hazardous substance training courses. Increased use of webinars enhanced our ability to serve the Region IX, and beyond.

The CE and Outreach Programs expanded the membership and the role of their mutual Advisory Committee. Several prominent health and safety professionals were added to bring the total to 17 members. New members represent Northern California, Arizona and Hawaii. One new member is a hazardous substance expert. The CME committee was also expanded and now includes representatives of Northern California and Arizona.

Several new courses have been added including Certified Hazardous Materials Practitioner Exam Prep Course, Cal/OSHA (or OSHA, outside California) Workplace Safety Boot Camp 101, Sampling and Instrumentation and the Emergency Preparedness Webinar. We are expanding the curriculum and participation of health care professionals in our Ethics for Health and Safety Professionals Webinar and it will become a required activity for ERC-supported students.

6. Outreach: We are working with professional associations such as ASSE and AIHA sections in Arizona, Nevada and Hawaii about taking some of our courses to their locations to increase the reach of the Center's training programs. We have secured a training site in Arizona and are offering courses in October 2011. We are working with the TPG at the University of Arizona on collaborative projects including bringing their miner safety training to California. Under the third year of a three-year grant from The California Wellness Foundation, the program is training more than 300 hotel housekeepers, kitchen workers, janitors and their supervisors in injury and illness prevention per year.

The program is preparing a number of grant proposals in order to be able to conduct training in workplace violence prevention; hearing loss prevention among people working on farms; miner safety; health care workers and, in particular, workers in the decontamination, disinfection and sterilization of medical instruments and equipment; and aging workforce including reproductive impacts.

#### **2010-11 Academic Program Summary Data**

<b>Program</b>	<b>IH</b>	<b>OMR</b>	<b>OEHN</b>
Graduates	6	3	8
Trainees	11	5	14

